

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of recognising a pattern comprising a sequence of sub-patterns, the method comprising:

- a) generating a data sequence representative of a physical entity;
- b) applying the data sequence to a set comprising active models in a network of models including at least one model, wherein each model represents a sub-pattern and comprises a finite state network;
- c) assessing each state of members of said set and deactivating those states that do not meet a predetermined first criterion, between the application of successive data elements;
- d) selecting a subset of the outputs of the members of said set according to a predetermined second criterion; and
- e) adding further models to said set in dependence on the members of said subset, wherein each model represents a sub-pattern and in use outputs an indication of the degree of matching between an input data sub-sequence and the represented sub-pattern, and the further models take at least one of the subset members as inputs, and each model comprises a finite state network; and

~~assessing each state of members of said set and deactivating those states that do not meet a predetermined criterion, between the applications of successive data sequence elements.~~

2. (original) A method according to claim 1, wherein a further model is only added to said set if the set does not already contain that model.

3. (previously presented) A method according to claim 1, wherein the data sequence is applied to the network element-by-element and the selection of a subset of the outputs of the set of models is performed for each of successive applications of data sequence elements.

4.-5. (canceled)

6. (previously presented) A method according to claim 1, wherein a model is removed from said set if all of its states have been deactivated.

7. (previously presented) A method according to claim 1, wherein the criterion applied to the model outputs is harsher than the criterion applied to states within models.

8. (previously presented) A method according to claim 1, wherein the application of the criterion applied to model outputs comprises creating a histogram of model outputs on the basis of their values and selecting those outputs in the bins of the histogram which contain the outputs having the best m values, wherein m is an integer.

9. (previously presented) A method according to claim 8, wherein model outputs are selected by setting output(s) that are not selected to a predetermined value.

10. (previously presented) A method according to claim 1, wherein the application of the criterion applied to all model states comprises creating a histogram of states on the basis of their values and selecting those states in the bins of the histogram which contain the states having the best n values, where n is an integer, for deactivation.

11. (previously presented) A method according to claim 1, wherein the pattern to be recognized is a speech pattern.

12. (previously presented) A method according to claim 11, wherein the models comprise models of sub-word vocalisations.

13. (previously presented) A method of generating a speech signal comprising performing a method according to claim 11, and operating a speech synthesizer in dependence on the result of performance of said method.

14. (previously presented) A method of operating a telephone switching centre comprising performing a method according to claim 11 and commanding a telephone switching centre for the purpose of establishing a telephone connection in dependence on the result of the performance of said method.

15. (currently amended) A method of operating a computer so as to recognise a pattern comprising a sequence of sub-patterns, the method comprising:

generating a data sequence representative of a physical entity;

applying the data sequence to a set comprising active models in a network of

models including at least one model, wherein each model represents a sub-pattern and comprises a finite state network;

assessing each state of members of said set and deactivating those states that do not meet a predetermined first criterion, between the application of successive data elements;

selecting a subset of the outputs of the members of said set according to a predetermined second criterion; and

adding further models to said set in dependence on the members of said subset,
~~wherein each model represents a sub-pattern and in use outputs an indication of the~~
~~degree of matching between an input data sub-sequence and the represented sub-pattern,~~
~~and the further models take at least one of the subset members as inputs, and each model~~
~~comprises a finite state network; and~~
~~assessing each state of members of said set and deactivating those states that do~~
~~not meet a predetermined criterion, between the applications of successive data sequence~~
~~elements.~~

16. (currently amended) A pattern recognition apparatus for recognising
a pattern comprising a sequence of sub-patterns, the apparatus comprising:

means for generating a data sequence representative of a physical entity;

means for applying the data sequence to a set comprising active models in a
network of models including at least one model, wherein each model represents a sub-
pattern and comprises a finite state network;

means for assessing each state of members of said set and deactivating those states
that do not meet a predetermined first criterion, between the application of successive
data elements;

means for selecting a subset of the outputs of the members of said set according to
a predetermined second criterion; and

means for adding further models to said set in dependence on the members of said subset, wherein ~~each model represents a sub-pattern and in use outputs an indication of the degree of matching between an input data sub-sequence and the represented sub-pattern, and the further models take at least one of the subset members as inputs, and each model comprises a finite state network; and~~

~~means for assessing each state of members of said set and deactivating those states that do not meet a predetermined criterion, between the applications of successive data sequence elements.~~

17. (original) An apparatus according to claim 16, wherein a further model is only added to said set if the set does not already contain that model.

18. (previously presented) An apparatus according to claim 16, wherein the data sequence is applied to the network element-by-element and the selection of a subset of the outputs of the first set of models is performed between the applications of successive data sequence elements.

19.-20. (canceled)

21. (previously presented) An apparatus according to claim 16, wherein a model is removed from said set if all of its states have been deactivated.

22. (previously presented) An apparatus according to claim 16, wherein the criterion applied to the model outputs is harsher than the criterion applied to states within models.

23. (previously presented) An apparatus according to claim 16, wherein the pattern to be recognized is a speech pattern.

24. (original) An apparatus according to claim 23, wherein the models comprise models of sub-word vocalisations.

25. (previously presented) An apparatus for generating speech signal comprising an apparatus according to claim 23, and a speech synthesizer configured for operation in dependence on the operation of the speech recognition apparatus.

26. (currently amended) A telephone network apparatus comprising an apparatus according to claim 23 and a telephone switching centre, wherein the telephone switching centre operates to establish a telephone connection in dependence on the operation of the ~~speech~~ pattern recognition apparatus.

27.-28. (canceled)